

## **Pre-COVID telecommuting patterns reveal possible future impacts of remote work**

*This policy brief is the third in a series of four exploring the data from the Chicago Metropolitan Agency for Planning's (CMAP) most recent regional travel survey, [My Daily Travel](#). My Daily Travel is CMAP's fifth travel survey, a primary-source data collection effort undertaken roughly every decade to generate a detailed picture of how and why people travel within the Chicago region. It draws from a representative sample of more than 12,000 households.*

*This policy brief investigates what the survey can reveal about telecommuting behavior. It will explore who in the region took advantage of telecommuting in 2019 and how the travel patterns of those residents differed from others in the region. The previous pieces in this series examined data about everyday travel patterns and disparities in residents' experiences with northeastern Illinois' transportation system. The fourth and final piece in the series highlights new and emerging trends in mobility, such as the rapid growth of transportation network companies (TNCs) like Uber and Lyft and the emergence of bike-sharing systems in the region.*

*Note: The My Daily Travel survey reflects travel patterns and preferences in the region as of 2019, before the COVID-19 pandemic. Although patterns have changed because of the pandemic, the My Daily Travel survey can reveal long-term travel trends that may reassert themselves as recovery continues.*

### **Key findings**

- Even before the COVID-19 pandemic, more residents were telecommuting for work in 2019 than in 2008, with significant disparities in who was able to do so. Residents from households with low incomes, Black residents, and Latino residents were the least likely to have access.
- Telecommuting might make longer commutes more acceptable to residents. On days when they worked outside the home, suburban travelers who reported telecommuting for part of the week had the longest trips to and from work.
- On days when they commuted to a workplace outside the home, part-time telecommuters from the suburbs were more likely to take transit than were other suburban residents.
- Part-time telecommuters traveled the longest distances on an average weekday, even though fewer part-time telecommuters reported traveling to workplaces outside of their homes on an average weekday.

The My Daily Travel survey provides insights on the travel behavior of regional households, but it also reveals information about when those residents are *not* traveling. In particular, the survey highlights the prevalence of “telecommuting,” also commonly referred to as working remotely. This behavior was relatively common even before the COVID-19 pandemic. Its increasing prevalence could have significant effects.

Telecommuting changes the traditional pattern of commuting. It alters not only the number of trips to and from work, but also the time, distance, and location involved. Telecommuting can even affect trips that have nothing to do with work. Before telecommuting, a traveler might have dropped their children off at school on the way to work, or picked up groceries on the way home. But a telecommuter might now instead make each of these as a separate trip, creating new demands on the transportation system, at new times and places, versus those before the pandemic.

This policy brief will explore telecommuting in the context of northeastern Illinois. It will review access to telecommuting before the pandemic, how it influenced residents’ travel patterns, and what more widespread remote work in the coming years could mean for the region.

### **Telecommuting was not equally available for residents before COVID-19**

Although the pandemic has accelerated the adoption of telecommuting and working from home,<sup>1</sup> many of the region’s residents already were taking advantage of these options in 2019. Overall, 14 percent of all employed residents reported telecommuting at least once a week. An additional 2 percent reported working from home without telecommuting (likely including many self-employed residents). This is a significant increase since CMAP’s 2008 travel survey. One and a half times more workers reported telecommuting at least once a week in 2019 versus 2008.<sup>2</sup>

Across the region, this represents 590,000 residents who were telecommuting at least one day per week. However, significant disparities existed by age, income, and race and ethnicity in terms of who in the region was telecommuting before COVID-19 and who was not.

**Residents from low-income households and Black and Latino residents were the least likely to telecommute prior to COVID-19.**

Note: Includes only employed residents age 16 and older from the CMAP seven-county region, Grundy, and DeKalb. See "About the data" for more information on race, ethnicity, and sex.

Sample size: Figures are based on a total of 17,656 residents. Across all categories, residents age 70 and above have the lowest sample size, with 257 individual residents.

Source: Chicago Metropolitan Agency for Planning analysis of My Daily Travel data.

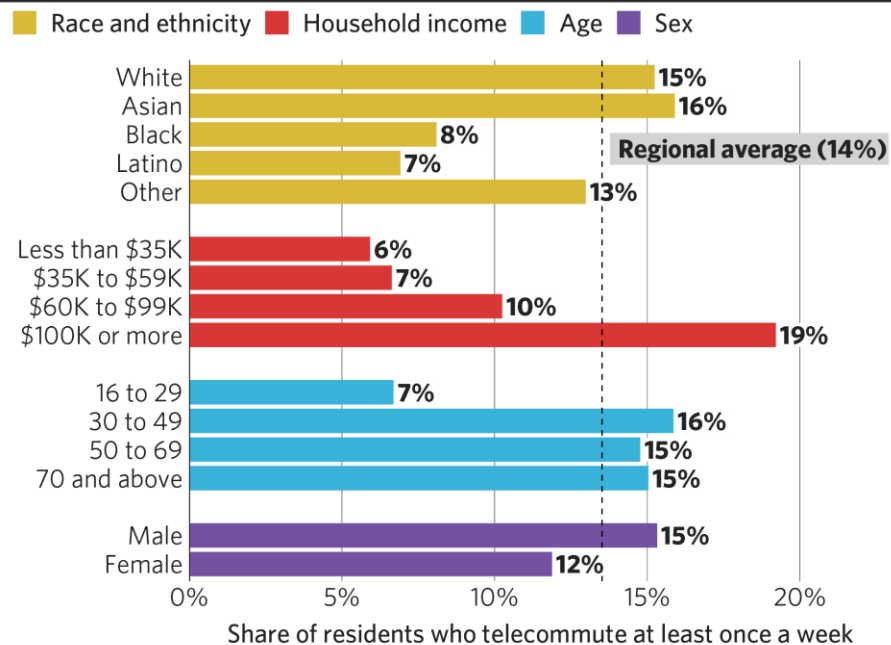


Figure 1

Although 14 percent of the region's employed residents reported telecommuting, the numbers were much lower for some groups. For younger workers between 16 and 29 years old, the share was 7 percent. For Black and Latino residents, it was 7 to 8 percent. For residents with household incomes under \$60,000 a year, the share was 6 to 7 percent. Telecommuting also varied by sex. Men were 3 percentage points more likely to report telecommuting than women.

In spring 2020, CMAP analysis found that lower-income workers and workers of color are [disproportionately](#) providing the essential services that require in-person work. A recent Regional Transportation Authority (RTA) [survey](#) also found that transit riders who continued taking transit during the pandemic disproportionately have been essential workers, Black, Latino, or low income.

As other regional industries set up the infrastructure and policies required to work remotely, these essential services have by necessity remained fixed in specific places. Many essential workers also have continued to travel outside the "traditional" morning and evening rush hour commute. It will be crucial for policymakers to understand the impacts of these changes as the region emerges from the pandemic and, in particular, whether disparities in access to telework actually grow in the future compared to those captured in 2019.

### A rise in telecommuting might not mean decreased travel demand

Although the long-term impacts of the pandemic remain unclear, more residents in the region appear likely to telecommute at least some of the time in the future. As public officials plan for

future transportation system demands, they need to understand how such a change might affect the transportation system as a whole.

For example, a plausible future scenario is that more residents in the region will telecommute a few days a week, while still commuting to a fixed work location on other days. A recent survey from the Regional Transportation Authority (RTA) also found that transit riders expect to work remotely significantly more often in the future. According to the RTA survey, riders expect to work remotely 15 percent of the time after COVID-19, compared to 6 percent of the time before the pandemic. Post-pandemic norms on remote [remain uncertain](#), and some initial estimates of the scale of future remote work have been revised downward over the course of the pandemic. However, national surveys of workers, regardless of commute mode, also have found similar shifts to those identified by the RTA. Recent estimates of post-pandemic [remote work](#) have ranged from 15 to 20 percent.

An initial reaction might be that more people telecommuting will automatically lead to less travel — after all, those residents would take fewer trips to and from work. However, the reality is likely to be more complex. For example, [prior research](#) has found evidence that individuals who work from home are more willing to tolerate longer commutes on days when they go into the office. Data from My Daily Travel supports this finding in northeastern Illinois.

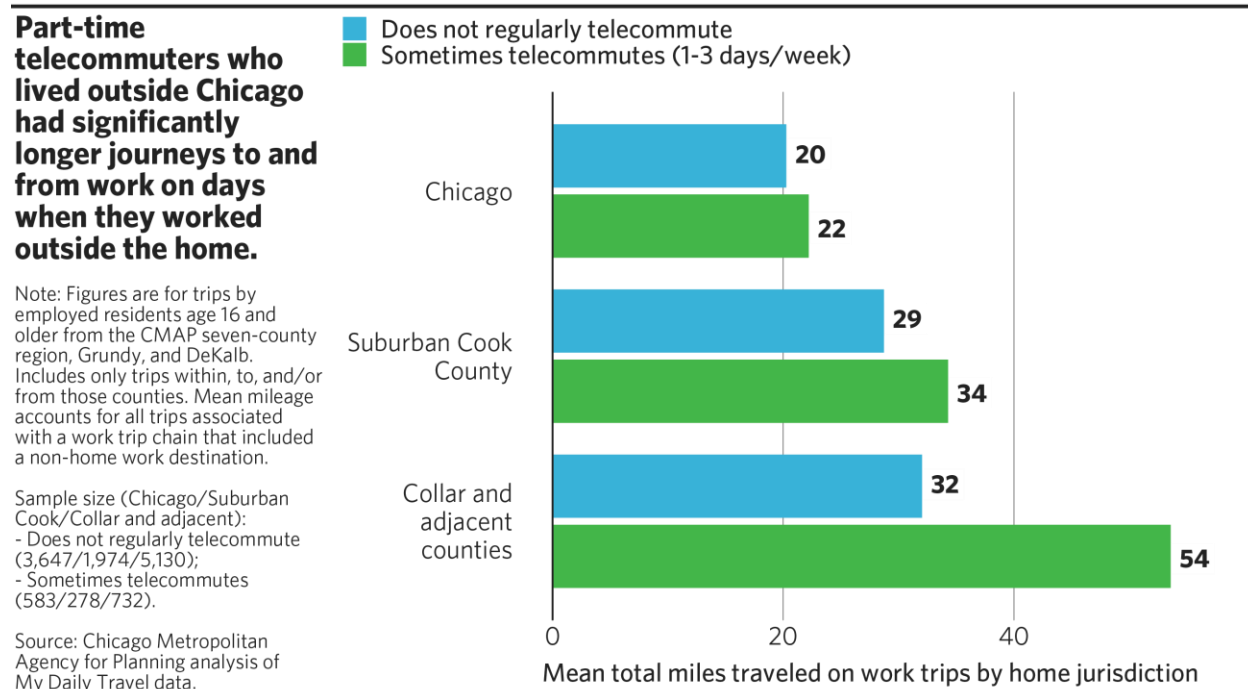


Figure 2

The My Daily Travel survey reveals that residents who fit that part-time telecommute pattern traveled significantly longer to and from work than residents who did not telecommute. This was especially true for suburban residents, particularly those outside Cook County. On days

when they had to go to an office or location for work, part-time telecommuters living outside Cook County traveled an average of 54 miles to and from work. Non-telecommuters living outside Cook County only traveled an average of 32 miles.<sup>3</sup>

When they commuted to work, suburban part-time telecommuters tended to fall into one of two categories. Some traveled into downtown Chicago, typically by transit. Many others never went near the central business district and instead traveled from one suburban location to another, usually by car.

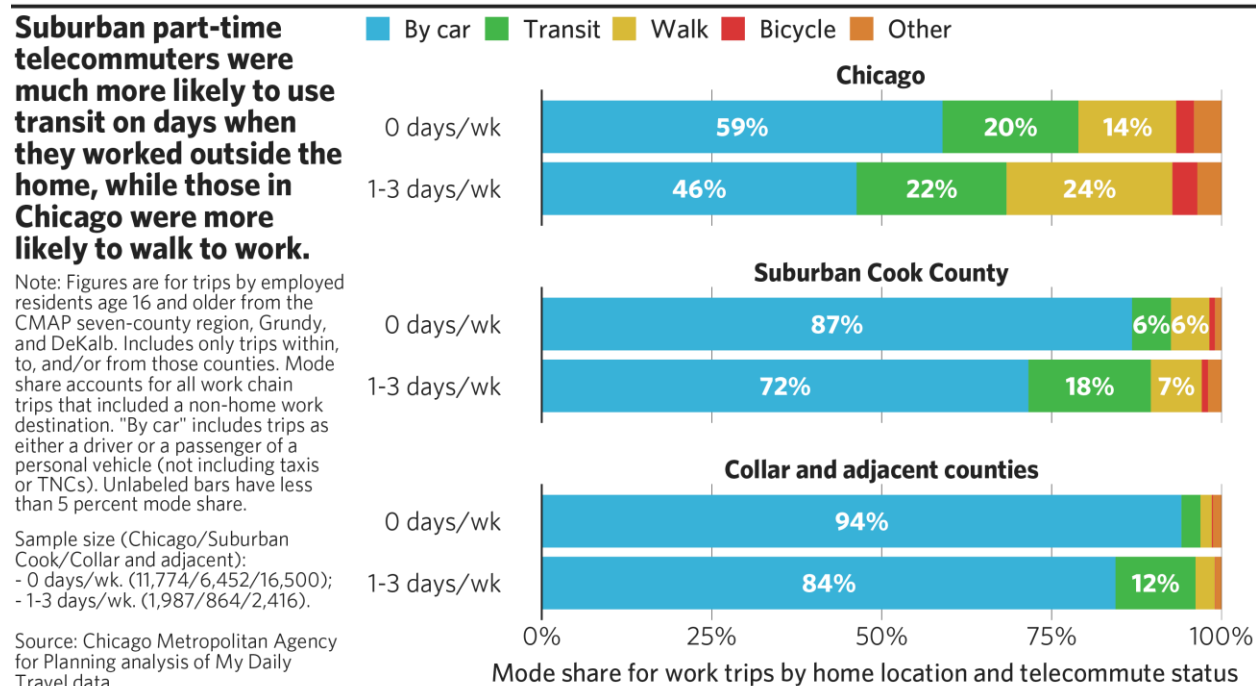


Figure 3

As shown above, part-time telecommuters were more likely to rely on transit than their full-time, in-person counterparts. Part-time telecommuters from suburban Cook County relied on transit for 18 percent of work trips versus 6 percent for other residents. For residents outside Cook County, the disparity was proportionally greater — 12 percent for part-time telecommuters versus 3 percent for in-person workers.

The charts above provide insights into how telecommuters might travel on days when they do not work remotely. In contrast, the chart below captures travel patterns for all trips in the region on an average day. As shown in Figure 4, even accounting for the fact that some telecommuters did not take a work trip on their recorded survey travel day,<sup>4</sup> suburban part-time telecommuters still traveled the longest distances.

**On average, part-time telecommuters living outside Chicago traveled the greatest distances every day.**

Note: Figures are for trips by employed residents age 16 and older from the CMAP seven-county region, Grundy, and DeKalb. Includes only trips within, to, and/or from those counties. Individuals who did not travel are included as having zero travel distance.

Sample size (Chicago/Suburban Cook/Collar and adjacent counties):  
 - Not regular (4,889/2,632/6,915);  
 - Sometimes (838/424/1,100);  
 - Almost always (251/168/437).

Source: Chicago Metropolitan Agency for Planning analysis of My Daily Travel data.

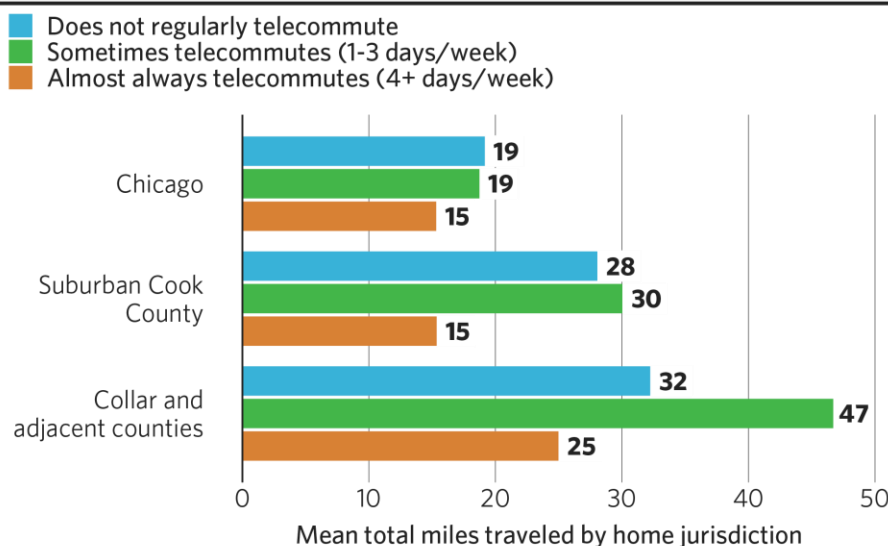


Figure 4

In comparison, Figure 4 also shows workers who almost always telecommuted tended to travel less than their employed peers. These telecommuters had longer non-work journeys than other travelers did.<sup>5</sup> This is consistent with prior research that [showed](#) telecommuting can induce additional home-based travel. However, telecommuters' sharply lower levels of work travel more than offset their increased levels of home-based travel.

### Looking ahead

If more residents in the region take advantage of telecommuting in the long term, they may not automatically shift their habits to the patterns shown in the charts above. New telecommuters may behave differently than existing ones, particularly if their residential and employment locations differ from past telecommuting norms. Furthermore, the similarity between total travel distances for non-telecommuter and part-time telecommuter Chicago residents emphasizes that these patterns could change.

More widespread teleworking could lead to longer-term changes. Employers may reduce or relocate workspaces in the central business district and suburban employment clusters. Residents who had a short, everyday commute before COVID-19 may consider jobs within a wider area, especially if they only need to commute two or three days a week. Residents might use this flexibility to move farther away from the region's job centers. They might also seek new housing that better accommodates remote work. Recent research has revealed that before the pandemic, people who worked remotely tended to live in larger homes. Part-time [telecommuters](#) also had a moderate preference for living in more suburban locations.

The future effects of these teleworking trends remain unclear. Long-term changes will depend in part on other shifts, such as the development and availability of housing throughout the

region. But even if residents make no changes other than working more from home, they might still [increase](#) their overall travel, if they replace work trips with more journeys closer to home.

These new or shifting demands on the transportation system also might come outside morning and evening peaks. This would allow the transportation network to accommodate much of the demand with current capacity, supporting the ON TO 2050 recommendation to build regionally significant [projects](#) that maintain and enhance the region's expressways, arterials, and transit system. It also would provide the region with [opportunities](#) to leverage technologies and approaches that maintain these shifts even after the pandemic is long past.

Despite these benefits, simply shifting existing travel to other times still would not significantly help achieve other important regional priorities by 2050, such as reducing greenhouse gas emissions to 80 percent of 1990 levels or eliminating all traffic fatalities. If travelers replace previous transit trips with ones taken by car or other less sustainable modes, those metrics may even shift away from the targets that ON TO 2050 set.

As the region continues its recovery from the pandemic, public officials need to monitor how telecommuting is altering long-term travel behavior. The trends outlined in this policy brief show telecommuting will likely have mixed results on the transportation system. However, policymakers can affect the scale and scope of those impacts in coming years. Their actions can enable residents to take advantage of new opportunities while still contributing to a safer, more sustainable, and more economically vibrant region.

### **Actions for public officials**

- Ensure residents have access to reliable transit and other transportation options, especially outside the morning and evening rush hour.
- Promote walkability in communities to accommodate existing pedestrians and support more sustainable trips. Residents may work from home more often and rely on nearby sidewalks and other local infrastructure as they make trips to and from their homes rather than to and from their work.
- Monitor ongoing developments in telecommuting and remote work behavior to inform transportation system policies and investments.
- Collaborate with employers that offer telecommuting to promote transit and other sustainable modes on days when their employees are working on-site.

### *About the data*

Unless otherwise cited, the analyses in this series of policy updates rely on the data from CMAP's My Daily Travel (2019) and Travel Tracker (2008) surveys. Both surveys are available on CMAP's [Data Hub](#). CMAP used R, a free open source statistical package, to analyze the data. The R scripts used to perform these analyses are available on CMAP's [GitHub page](#). In addition to these scripts, the GitHub page includes information about the assumptions used and data

exclusions applied. Partners are encouraged to use and build on this analysis to understand travel dynamics relevant to their constituents and stakeholders.

For all references to race and ethnicity, “Latino” includes respondents who identified as Latino or Hispanic, regardless of racial category. All other race and ethnicity categories are non-Latino. For the categorization by sex, the My Daily Travel survey asked respondents whether they were male or female. A small number of respondents chose not to answer, either because the available options were not sufficient or for some other reason. Due to low sample sizes and weighting concerns, average travel behavior statistics are unavailable for this population.

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<sup>1</sup> The My Daily Travel survey asked respondents whether and how many days per week they telecommuted instead of working on-site. The survey separately asked respondents whether their primary workplace was their home. Respondents could thus be categorized as telecommuters, working from home, both, or neither.

<sup>2</sup> The 2008 survey did not ask individuals who reported their home as their workplace whether or not they telecommuted, limiting the possible direct comparisons of overall figures. Comparing the share of workers working outside the home but telecommuting at least once a week, it was 7 percent in 2008 and 11 percent in 2019.

<sup>3</sup> This mileage includes the “chain” of trips associated with the captured commute to and from work. This could just be the trips from home to work and from work to home, but it could also include any additional stops, such as a visit to the grocery store on the way home from work or a drive to get lunch during the work day.

<sup>4</sup> While 76 percent of non-telecommuters reported traveling to a workplace outside the home on their assigned survey travel day, only 70 percent of part-time telecommuters reported doing so.

<sup>5</sup> For example, full-time telecommuters outside Cook County had an average of 18 miles traveled on non-work trips versus 11 miles or less for other employed residents outside Cook County.